

DEVARAKONDA REDDY MANOJ

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CAREER OBJECTIVE

My passion towards vehicles kept on increasing from my childhood. I would love to start my career in an entry level of an Automobile Division, which keeps my passion alive. And I would like to see steady growth in my employment which equals to the improvement in my performance.

EDUCATION

Degree/ Examination	Year of Passing	School/Institute	Board/University	Percentage/ Grade
B.Tech (MECH)	2019	Madanapalle Institute of Technology & Science	JNTU-A	7.81
Class XII	2015	Yogananda Junior College, Tirupathi	Board of Intermediate Education, AP	87.3
Class X	2013	S.V.L. M.E.M. High School, Madanapalle	Board of Secondary School Certificate, AP	9.5

PROJECT WORK / TRAINING

- **Four Bar Mechanism**

It is a typical four bar mechanism which explains the conversion of rotational motion into longitudinal motion. It is made up of used hollow pen tubes and dried refill tubes. Holes are made by soldering stick. The Links are connected by the help of refill tubes.

Domain: Machine Design-I

Work: Assembly

- **Hybrid Electric Vehicle**

Mahindra & Mahindra 540 (Jeep) is converted into Hybrid Electric Vehicle. The rear wheels run on IC Engine and the Front wheels run on Electric Motors, which are powered by Lithium-Ion battery pack. The Vehicle is converted so, to reduce sound pollution and air pollution. The Engine is kept as is it for emergency and long distant use.

Domain: Automobile

Role: Team Leader

Work: Project Planning, Machining.

Test run in Gasoline mode:

https://drive.google.com/open?id=1-6efez03lHmKxZ_vl0NJ1sevpkQUMW90

Test run in Electric mode:

https://drive.google.com/open?id=1_Ml4s06-3O7PteST1OIpbPuAqzJO4tV

Overview of the vehicle:

<https://drive.google.com/open?id=1StUoGmfWviIxt-RmwXc7vYFLZnw6uCY>

Passenger capacity and Off-road ability of the vehicle:

https://drive.google.com/open?id=1hCK3wFb2I2ep_YV_eTQypLkmUvRP1Lyo

The Hindu Newspaper

https://www.thehindu.com/todays-paper/tp-national/tp-andhrapradesh/mits-students-design-hybrid-electric-vehicle/article27043765.ece?fbclid=IwAR1BjYIQXb0ZKAj8f5ypiEZho0jIx9U3vHIOx4_7zDoarcWQmzUnV--CA78

- A ten day Mechanical Engineering training at Cochin Port Trust, Kochi.

AREAS OF INTERESTS

- IC Engines
- Production Techniques

SKILL SET

- **Designing:** AutoCAD, CATIA, ANSYS
- **Software:** Microsoft office Word, Excel, Powerpoint
- **Hardware:** Drilling, Carpentry, welding, Foundry. Sheet metal, Lathe etc.,

ACADEMIC ACHIEVEMENTS & CO-CURRICULAR ACTIVITIES

- Participated in National Industry Machinery Expo (NIME-2017), Tirupathi.
- Participated in a workshop on Vehicle reconstruction at VIT, Vellore.
- Participated in 104th Indian Science Congress at Tirupathi.
- Participated in a workshop on Additive Manufacturing at MITS, Madanapalle.

EXTRA CURRICULAR ACTIVITIES

- I like drawing. Free hand style drawing is my hobby.
- I am a random Photographer.

PERSONAL DETAILS

- **Father's name:** D Raghunath
- **Date of Birth:** 4th May 1998
- **Linguistic Proficiency:** Telugu, English, Hindi
- **Address:** Angallu(V), Kurabalakota(M), Chittoor(D), 517327.

DECLARATION

I hereby declare that the information furnished above is true to best of my knowledge.

D. Reddy Manoj

Cover Letter

I was said that I am fond of cars since my childhood. Later I grew up, I knew that it is true. I love driving and riding vehicles. I also love to learn how those vehicles work. My passion drove me to choose Mechanical Engineering in Bachelor of Technology. I found many subjects which help my passion turn into a profession. The most awaited Final year in B. Tech started in 2018. Everyone was busy in searching ideas for their Mini-Project. But I was decided long ago to work for a Vehicle. Hybrid Electric Vehicle is my Project Idea. I planned to convert my own vehicle into Hybrid Electric Vehicle. I own a Rear Wheel Drive Off - road Vehicle (Jeep). Our Project Idea is to implement another power train in the same vehicle to make it a hybrid vehicle. We chose electric power train to reduce the air and noise pollution, which are the most worried issues now-a-days in Automobile technology.

My Learning started from the day when my parents bought me a Jeep from Scrap. From the day, I owned it, I was there in every re-construction process of the vehicle. (Chassis work, Engine work, Wheels, Steering, Transmission system, Body work, Painting, etc.,). That learning made me familiar with my Jeep and threw me in getting clear cut ideas. We installed a front differential housing for my Jeep. After that, two electric motors are placed under the driver seat. The RPM of those motors gets reduced at the shaft below the motors. That power is transmitted to the front differential of the vehicle. The Vehicle ran successfully both on road and off-road carrying at least four members in it. Yet, there are few rectifications. They are vehicle forward speed. The Vehicle moves slowly forward, because, the controller forward program is to drive the motors with high RPM and reverse program is to drive the motors with less RPM. Unfortunately, the motors' reverse motion turned to be the vehicle forward motion. So, the vehicle moves slowly in forward direction. A Battery Management System (BMS) is to be installed in the Electric power train system to save the Lithium Ion battery from Voltage damage and extend its durability.



Figure 1 Hybrid Electric Vehicle